

## A New Mysid Genus, *Teratamblyops*, from Deep-sea with Description of Two New Species (Crustacea: Mysidacea: Mysidae: Erythropini)

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**Abstract** A new mysid genus, *Teratamblyops*, is established. It is characterized by the carapace with broadly rounded anterior margin, the blind eye with no trace of visual elements, the antennular peduncle with the third segment divided into two portions, and the telson armed distally with slender spines and without plumose setae on the apex. Two new species belonging to this new genus, *T. suluensis* and *T. philippinensis* are described. *Dactylerythroops gracilurus*, collected from southwest of Ireland, is transferred to this new genus.

**Key words:** Mysidae, *Teratamblyops*, new genus, new species.

### Introduction

I discovered two new species in close resemblance to *Dactylerythroops gracilurus* Tattersall, 1907, among mysid specimens collected during scientific cruises by R/V Hakuho Maru, the Ocean Research Institute, University of Tokyo. These three species, however, are considerably different from the type species of the genus *Dactylerythroops*, *D. dactylops* Holt and Tattersall, 1905, in many aspects, such as the eye, antennular peduncle, antennal peduncle, telson and so on. Accordingly, it is judged that the establishment of a new genus receiving these three species is appropriate. The type specimens are lodged in the National Science Museum, Tokyo (NSMT).

### *Teratamblyops* gen. nov.

**Diagnosis.** Carapace with broadly and evenly rounded anterior margin without rostral projection; anterolateral angle rounded. Eyes separately set, markedly reduced to thin plate without any trace of visual elements, produced anteriorly into 1 or 2 processes, definite eyestalk absent. Antennular peduncle short, complicated in structure; third segment divided into 2 portions, distal portion produced ventrally and medially with several long setae. Antennal scale overreaching distal end of antennular peduncle for about half of its length, outer margin with strong denticle marking end of naked part. Antennal peduncle 4-segmented, fourth segment connected with third segment in ventral side. Marsupium composed of 2 pairs of oostegites. Female

pleopods reduced to unsegmented single lobe. Endopod of uropod without spines in statocyst region. Telson elongate triangular with narrow apex; lateral margin nearly straight, with spines on distal third to half; apex with pair of spines, without plumose setae.

*Type species.* *Teratamblyops suluensis* gen. nov., sp. nov.

*Etymology.* The generic name is derived from the curious and complicated structure of the antennular peduncles. It is masculine in gender.

*Remarks.* The new genus, *Teratamblyops*, is easily distinguished from allied genera by the rostrum with evenly and broadly rounded anterior margin, the eyes with no trace of visual elements and produced anteriorly into 1 or 2 processes, the antennular peduncles with third segment divided into two portions, the antennal peduncles with the fourth segment connected with the third in a different plane, the endopod of the uropod without spines in the statocyst region, and the triangular telson armed distally with spines but not with plumose setae on the apex.

*Dactylerythroops gracilurus* Tattersall, 1907, which was provisionally referred to that genus (Tattersall, 1907), as the shape and armature of the telson were somewhat divergent from the other two species which had already been known at that time, should be transferred to the present new genus, because it possesses the characters mentioned above and is considerably different morphologically from *Dactylerythroops dactylops* which is the type species of that genus (Tattersall, 1907, 1911; Tattersall & Tattersall, 1951), as shown in Table 1.

Currently, the genus *Teratamblyops* contains three species, two new species described below and *T. gracilurus*.

***Teratamblyops suluensis* sp. nov.**

(Figs. 1, 2)

*Type specimen.* Holotype (NSMT-Cr 13397), adult female (10.4 mm), Sulu Sea, 08°44.6'N 119°05.4'E to 08°44.8'N 119°06.2'E, 2030–2030 m, 25 May 1972, plankton net installed in mouth of 3-m beam trawl.

*Description.* Carapace with anterior margin broadly and evenly rounded without any trace of rostral projection (Fig. 1 A, B), antero-lateral angle rounded, posterior margin emarginate, leaving last thoracic somite exposed dorsally. Pseudorostral plate immediate below carapace extending anteriorly beyond anterior margin of carapace, triangular with rounded apex, anterior margin minutely hispid (Fig. 1 B).

Eye reduced to thin plate without definite eyestalk, outer and inner distal corners produced into acute process, outer process longer and more acute than inner; visual elements perfectly disappeared (Fig. 1 B).

Antennular peduncle short and intricate in structure; basal segment somewhat flattened, outer margin with 2 lobes tipped with several setae, ventro-lateral surface with 1 naked slender lobe, which is invisible in dorsal view, inner margin with 1 lobe

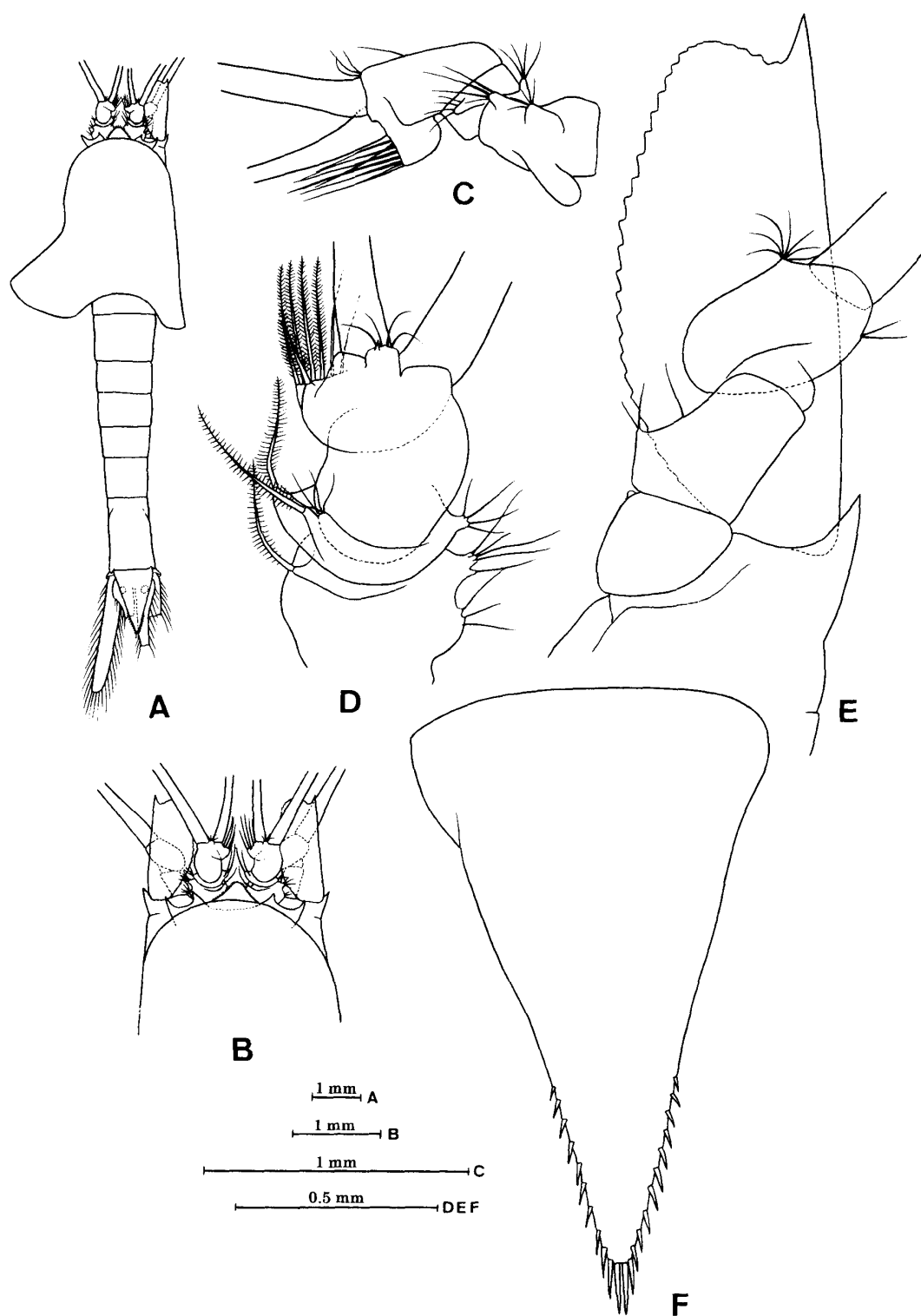


Fig. 1. *Teratamblyops suluensis* gen. nov., sp. nov., holotype (adult female). A, whole body in dorsal view; B, anterior end of body; C, antennular peduncle in lateral view; D, right antennular peduncle in dorsal view; E, antenna; F, telson.

armed with 1 long plumose seta near distal end; middle segment very short, outer margin projected laterally and armed with several setae, inner margin with 3 lobes, of which upper lobe small, with several setae, middle lobe terminating in 1 long plumose seta, lower lobe strongly produced antero-laterally, triangular in shape, terminating in 1 long plumose seta; distal segment longer than preceding 2 segments combined, divided into 2 portions by ventral deep transverse groove giving appearance of definite articulation, distal portion produced ventrally and medially, armed with 7 prominent plumose setae on frontal margin, proximal portion with inner and outer margins unarmed (Fig. 1 C, D).

Antennal scale broad, overreaching distal margin of antennular peduncle for about half of its length (Fig. 1 B), 2.5 times as long as broad; outer margin naked, slightly convex, terminating in strong spine beyond which apex of scale does not extend, distal suture absent (Fig. 1 E). Antennal peduncle extending slightly beyond distal margin of antennular peduncle, 4-segmented; first segment shortest; second segment 1.3 times as long as first, inner margin expanded medially and tipped with 2 setae; third segment short and narrow; fourth segment slightly longer than second, connected with third segment in ventral side, posterior part overlying above third segment and anterior part of second segment, (Fig. 1 E). Antennal sympod with prominent spine at outer distal corner (Fig. 1 E).

Mandibular palp: second segment broad, twice as long as broad, with long setae on both margins throughout; third segment narrow, half as long as second, armed on distal 2/3 of inner margin with about 22 setae arranged pectinately (Fig. 2 A). Maxillule: outer lobe with 13 spines on distal margin and 5 setae on ventral surface; inner lobe with 3 stout and 1 slender setae on apical margin, 6 setae on inner margin, 6 setae on outer margin and 6 setae on ventral surface (Fig. 2 B). Maxilla with exopod large, extending beyond proximal margin of second endopod segment, seta at distal end of inner margin thick, apicalmost seta long (Fig. 2 C). Labrum with anterior margin rounded.

Endopods of first and second thoracic limbs as shown in Fig. 2 D and E, respectively. Endopods of third to eighth thoracic limbs same in shape fundamentally, but different in size, third endopod shortest, third to sixth endopods becoming longer posteriorly, sixth to eighth endopods decreasing in size towards posterior pairs (Fig. 2 F, G). Exopods of thoracic limbs with flagellipart 9- or 10-segmented, basal plate with outer distal corner pointed. Marsupium composed of 2 pairs of lamellae.

Abdomen much longer than carapace; first somite slightly longer than second, second to fourth somites short and subequal, fifth somite slightly longer than fourth, sixth somite about twice longer than fifth, more than 1.5 times as long as broad (Fig. 1 A).

Female pleopods rudimentary.

Exopod of uropod long, slender, overreaching distal end of telson for nearly half of its length (Fig. 1 A). Endopod of uropod without spines in statocyst region.

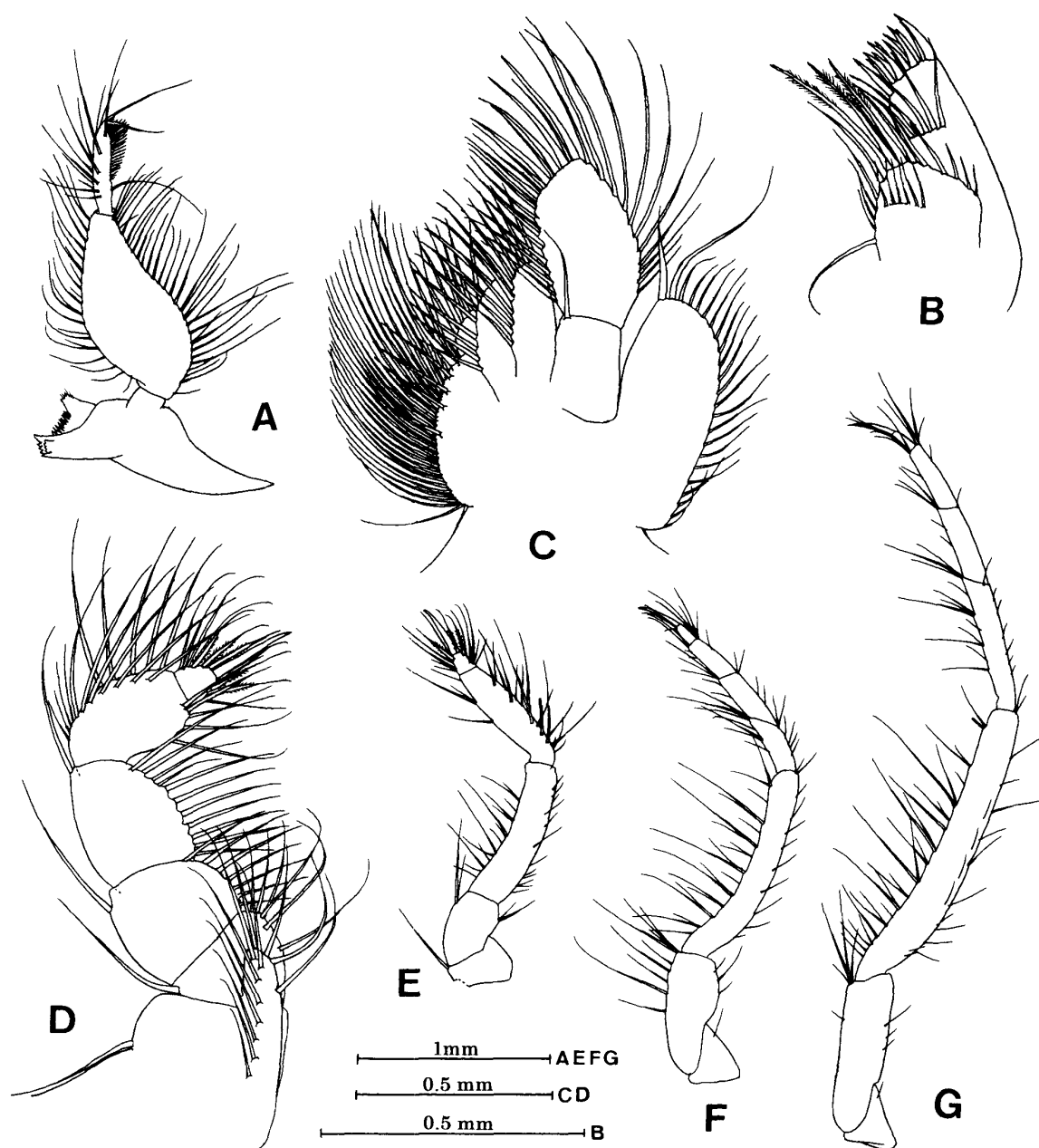


Fig. 2. *Teratamblyops suluensis* gen. nov., sp. nov., holotype (adult female). A, mandible; B, maxillule; C, maxilla; D, endopod of first thoracic limb; E, endopod of second thoracic limb; F, endopod of third thoracic limb; G, endopod of sixth thoracic limb.

Telson elongate triangular with narrowly truncate apex, slightly shorter than last abdominal somite, 1.7 times as long as broad at base; lateral margin nearly straight, armed on distal third with 10 or 11 spines increasing in length distally in general; pair of spines on apex slender, closely set, 1.5 times longer than distalmost lateral spine, and about 1/11 of telson length; apical median plumose setae absent (Fig. 1 F).

*Etymology.* The specific name, *suluensis*, refers to the locality in which the specimen was collected.

*Remarks.* The morphological differences from *Teratamblyops gracilurus* (Tattersall, 1907) and another new species described below, *T. philippinensis* are summarized in Table 2.

***Teratamblyops philippinensis* sp. nov.**

(Fig. 3)

*Type specimens.* Holotype (NSMT-Cr 13395), damaged female with half-grown marsupium, ca. 18 mm; E. of Mindanao, Philippines (05°23.1'N 130°25.3'E to 05°22.9'N 130°25.2'E), 5510–5510 m, 8 February 1979; paratype (NSMT-Cr 13396), immature female, 15.1 mm; E. of Mindanao, Philippines (05°30.8'N 130°20.2'E to 05°28.0'N 130°19.9'E, 5530–5530 m, 6 February 1979; both collected with plankton net installed in mouth of beam trawl.

*Description.* Carapace with broadly rounded frontal margin without any trace of rostral projection, covering considerable part of first segment of antennular peduncles (Fig. 3A); antero-lateral corner rounded; posterior margin deeply emarginate, leaving last thoracic somite exposed dorsally.

Eyes separately set, connected with membranous tissue below carapace, each reduced to triangular small lobe, not showing bifurcate termination, visual pigments perfectly disappeared (Fig. 3 A).

Antennular peduncle small, complicated in structure, 3-segmented; basal segment wider than long, lateral margin with 2 lobes, proximal one hump-like with 2 setae, distal one bilobed distally with several setae, dorso-medial margin with triangular small lobe tipped with long seta; middle segment shortest, lateral margin projected antero-laterally, with several setae, medial margin strongly projected medially to form triangular lobe, armed with strong single seta on tip, anterior margin of triangular lobe with 2 knobs, distal one with strong seta and posterior one feeble setae; distal segment as long as broad, divided into 2 portions by ventral deep transverse groove giving appearance of definite articulation, proximal portion unarmed, distal portion remarkably swollen inwardly and downwardly, armed with 7 long setae on ventral surface near base of inner flagellum (Fig. 3 A, B)

Antennal scale damaged, so that exact feature unknown but apex of scale clearly outreaching considerably distal margin of antennular peduncle and extending far beyond denticle marking end of naked part of outer margin (Fig. 3 A, C). Antennal peduncle 4-segmented; second segment projected medially and with several setae; third segment short, narrow; fourth segment connected with third segment in ventral side, as long as second, with several setae on distal end (Fig. 3 C). Antennal sympod with antero-lateral corner not produced into spine (Fig. 3 C).

Mandibular palp: second segment with setae along entire length of both mar-

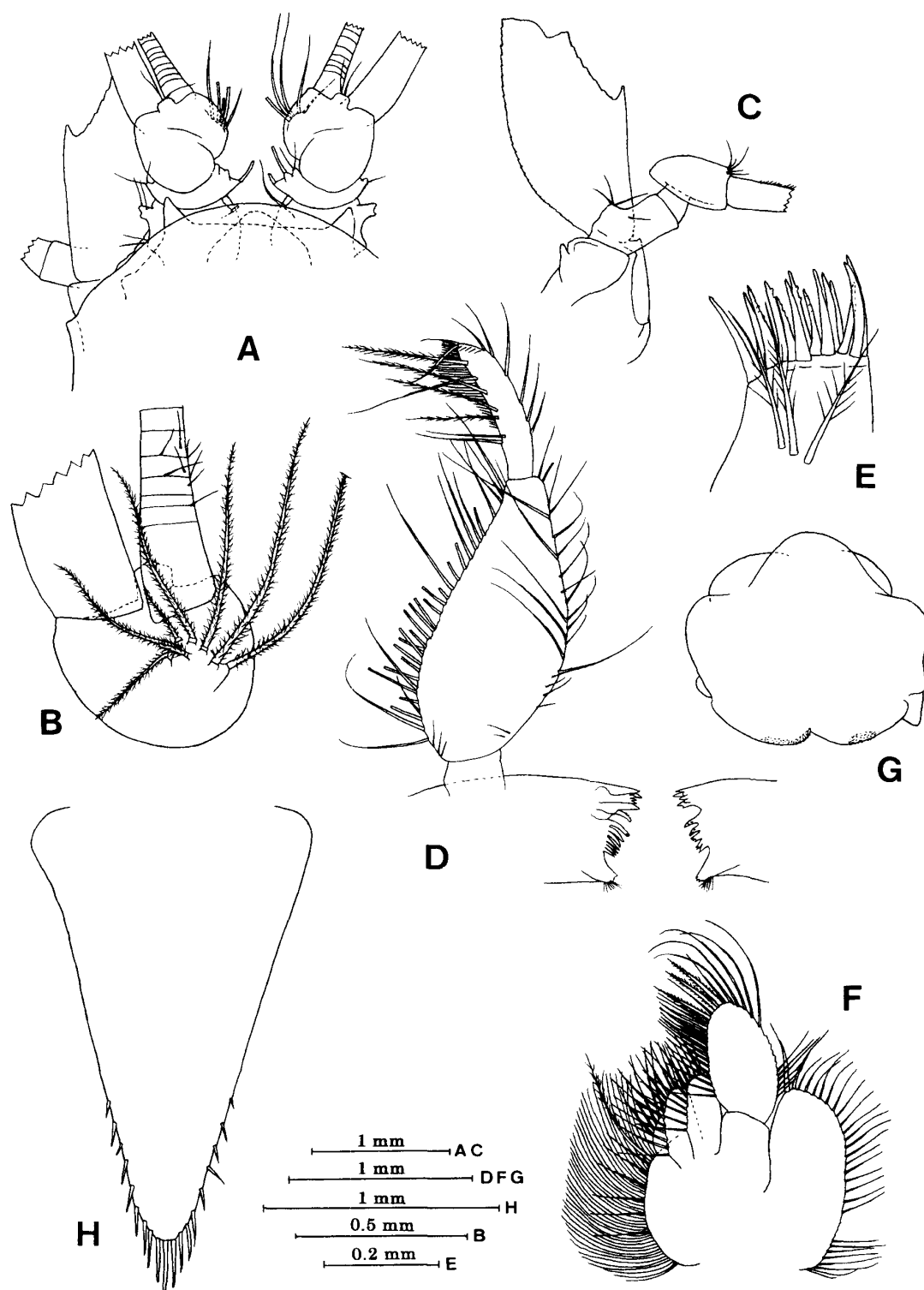


Fig. 3. *Teratamblyops philippinensis* gen. nov., sp. nov., holotype (near-adult female). A, anterior end of body; B, distal portion of right antennular peduncle in ventral view; C, left antenna in ventral view; D, mandible; E, distal portion of outer lobe of maxillule; F, maxilla; G, labrum; H, telson.

Table 1. Morphological comparison between the genus *Dactylerythrops*, represented by the type species of the genus, *D. dactylops* Holt & Tattersall, 1905, and *Teratamblyops gracilurus* (Tattersall, 1907).

	Genus <i>Dactylerythrops</i>	<i>Teratamblyops gracilurus</i> (Tattersall, 1907)
Eye	Pear-shaped, distal outer extremity produced into flexible finger-like process, visual elements in form of 6 to 8 plates	Plate-like, produced anteriorly into 2 processes, without finger-like process, visual elements perfectly reduced
Antennular peduncle	Third segment normal in structure	Appearing curiously contorted in lateral view, third segment divided into 2 portions
Antennal peduncle	Composed of 3 segments lined in straight	4-segmented, distal segment in different plane from preceding segments
Endopod of uropod Telson	With 1 spine in statocyst region With apical plumose setae	Without spines in statocyst region Without apical plumose setae

Table 2. Morphological comparison among the three *Teratamblyops* species.

	<i>Teratamblyops</i> <i>suluensis</i> sp. nov.	<i>Teratamblyops</i> <i>philippinensis</i> sp. nov.	<i>Teratamblyops</i> <i>gracilurus</i> (Tattersall, 1907)
Eye	Produced anteriorly into 2 acute processes	Produced anteriorly into a single process	Produced anteriorly into 2 acute processes
Antennular peduncle			
1st segment	Outer margin with 2 lobes, inner margin with 1 lobe	Outer margin with 2 lobes, dorso-inner margin with 1 lobe	Outer distal corner produced and tipped with setae, inner margin smooth (?)
2nd segment	Outer margin with 1 lobe; inner margin with 3 lobes	Outer margin with 1 lobe, inner margin with 3 lobes	Short and simple
3rd segment	7 setae on distal margin	7 setae on ventral surface	2 setae on inner distal margin
Antennal scale	Apex of scale not extending to apex of terminal spine of outer margin	Apex of scale extending far beyond apex of terminal spine of outer margin	Apex of scale extending beyond apex of terminal spine of outer margin
Telson	1.7 times as long as broad, with 10 or 11 spines on distal 1/3 of lateral margin	1.6 times as long as broad, with 8 or 9 spines on distal 1/3 of lateral margin	2 times as long as broad, with 16 to 20 spines on distal half of lateral margin
Body length	Adult female, 10.4 mm	Near-adult female, 18 mm	Adult female, 17mm; adult male, 15 mm



gins; third segment narrow, 5 times as long as broad, about half of second segment in length (Fig. 3 D). Outer lobe of maxillule with 14 rather long, slender spines (Fig. 3 E). Maxilla with exopod large, extending distally beyond proximal margin of distal segment of endopod (Fig. 3 F). Labrum slightly wider long, without frontal process (Fig. 3 G).

Abdominal somite consisting of 6 somites, last somite longest, 1.4 times longer than preceding one.

Endopod of uropod without spines in statocyst region, distal part broken off. Exopod of uropod broken off.

Telson slightly shorter than last abdominal somite, elongate triangular with narrowly rounded apex, 1.6 times as long as broad; lateral margin unarmed in proximal 2/3, armed on distal 1/3 with 8 or 9 slender spines increasing in length distally; apex with pair of slender spines which are longest among marginal spines, without median plumose setae (Fig. 3 H).

*Etymology.* The specific name, *philippinensis*, refers to the locality in which the specimens were collected.

*Remarks.* Differences from the other two species of this genus are summarized in Table 2.

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